Amendment and Response to Final Office Action

U.S. Serial No.: 10/018,727 Filed: August 9, 2002

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Claims Listing

 (Currently amended) A method for applying a reactive epoxy containing coating to a substrate, said method comprising subjecting said substrate to a pulsed plasma discharge in the presence of <u>glycidyl methacrylate</u> a <u>polymerizable epoxy monomer of</u> formula (II)

where R⁺ is a hydrocarbyl group, optionally substituted by a halo group, or a heterocyclic group and n is an integer from 1 to 20:

such that polymer growth of a reactive epoxy containing coating occurs on a surface of the substrate, wherein the pulsed plasma discharge is achieved by applying a power pulse to the plasma, each applied power pulse having a power off time of from 10,000 to 20,000 µs and wherein an average power density of the pulsed plasma discharge is less than 0.0025 W/cm³.

2-11. Cancelled.

12. (Previously presented) A method for immobilisation of a nucleophilic reagent at a surface, the method comprising the application of the reactive epoxy containing coating to the surface by the method of claim 1, and then contacting the surface

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with a solution of the nucleophilic reagent under conditions such that the nucleophilic

reagent reacts with the epoxy groups.

13-20. Cancelled

21. (Previously presented) The method of Claim 12, wherein the nucleophilic

reagent is a carboxylic acid or amine.

22. (New) A method for adhering two surfaces together, comprising applying a

reactive coating formed according to the method of Claim 1 to at least one of the surfaces, and contacting this surface with the other surface under conditions whereby reactive groups

in the coating will react so as to secure the two surfaces together.

23. (New) The method of Claim 22 comprising introducing a coupling agent

between the surfaces and allowing the coupling agent to react with reactive groups on each

surface.

24. (New) The method of Claim 22, wherein the reactive groups are epoxide

groups.

(New) The method of Claim 23, wherein the coupling agent is a diamine.

26. (New) The method of Claim 22, wherein the other surface includes

nucleophilic groups able to react with the reactive groups so as to bring about adhesion.

27. (New) The method of Claim 26, wherein the nucleophilic groups are

selected from amino or carboxylic acid groups.

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